SEPTEMBER 1992

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Hispanic BUSINESS

TECH GOES GLOBAL

The Top 40

Rebuild LA accelerates to a fast crawl

Bush invites top 250 CEOs to Rose Garden reception

Hispanics to McDonald's: "Honey, I spent $1.1 billion on burgers"

HIGH-TECH
Companies Grow 15 Percent

Hispanic BUSINESS

September 1992 Volume 14, Number 9

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Cover

Dr. C.E. (Tom) Velez, CEO of the largest Hispanic high-tech company.

Photo by Jeff Watts.

Inset: Alvaro Villa, CEO of AVG Inc.

Cover design by Buffalo Brothers Studios West.

DIRECTline

Like the legendary Mr. Smith, Hispanic CEOs went to Washington last July 28. They went because President Bush and key Congressional leaders wanted to acknowledge their accomplishments. They also went because, like all Americans, they know they must become more and more involved with the public business of the nation.

On a beautiful July day in the Rose Garden, President Bush and the White House staff extended splendid southern hospitality. The President was laudatory in his remarks. He explained that the accomplishments of the Hispanic small business community—its productivity and competitiveness—illustrate the spirit of American business overall.

But these CEOs did not visit Washington just to receive commendations. As Mary Alice Acevedo of San Diego made clear to Ambassador Carla Hills in a hard-nosed comment regarding the free trade negotiations, these people had business on their minds. Ms. Acevedo's company, Cal-State Lumber Sales Inc., reached $147 million in revenues last year, based largely on its fast growing international commerce with Mexico.

"The strength of small business... is its broad base."

The fact is that small businesses like Cal-State can't afford not to be involved with government and elected officials. Even the smallest firms are affected by today's climate of excessive governmental oversight and regulation.

The strength of small business, besides its great impact on U.S. employment and on total business receipts, is its broad base. If only small firms could organize themselves into a powerful force capable of exerting influence at key governmental and political decision points!

That theme emerged strongly during the discussions of July 28. Now these leading Hispanic CEOs want—or have indicated that they want—to troop to Washington annually, as a group.

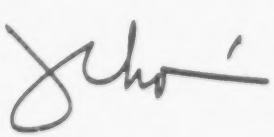
They want to meet with each other, discuss the issues that they confront as a group, focus on their common opportunities, and weigh possible common approaches. They want to be heard as a group.

And they *should* be heard.

The **Hispanic Business** 500 CEOs can become a powerful voice for the U.S. Hispanic community. They have tended to relate to the workings of politics and government as individuals, concentrating on the immediate issues affecting their separate markets. But now, they're beginning to see, they can form a national group—one that can benefit from acting in unity to develop a broader influence on the public sector.

That was the excitement—and the promise—of July 28.

Certainly it is an option that will be explored in the coming months. And perhaps the pictorial story in this issue describing the group's Washington visit will convey how well Hispanic business leaders were received, inspiring others to join in.



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MPA BPA CONSUMER MAGAZINES

Photo by M Christine Turnipseed

How did three Puerto Ricans from New York end up as leaders in San Francisco's school system? By coincidence, say (left to right) School Board member Dr. Carlota del Portillo, Superintendent of Schools Bill Rojas, and School Board member Fred Rodriguez.

Francisco. For this they receive a $500 per month stipend. "Whether we need it or not," Mr. Rodriguez comments wryly. Superintendent Rojas is then responsible for executing the School Board's policies.

The biggest challenge facing them all is a shortage of money, combined with ever-swelling school enrollments—a combination of factors that sorely tests their determination to hold the line on educational standards. As Mr. Rojas points out, the financial problems have worsened even since this spring when he accepted his job. "There appeared to be solutions then...My predecessor Ray Cortines did a wonderful job of keeping the ship afloat while taking [budgetary cuts of] $50 million in the past four years," he reflects.

"But now we are expecting a shortfall of $22 million more, and the fat has already been cut. Class sizes are already high, there is little administrative support, and we have almost no counsellors and no elementary assistant principals."

His biggest nightmare is that the new cuts will have to come out of the teaching staff. "I have cut 200 positions by not replacing teachers who have retired," Mr. Rojas worries, "but I may have to lose even more positions." Nevertheless, he says, straightening visibly, "we will continue to provide quality education with the $400 million that we have."

Board member Mr. Rodriguez is particularly concerned with the budget situation. "My experience on the School Board has been extremely frustrating," he confides, "because there has never been a commitment to the end result. While we are asked to deliver a quality system, we have limited tools to work with."

"And now Fred says he won't run again!" fellow Board member Dr. del Portillo wails. "I've tried everything—even bribery!" Mr. Rodriguez admits that, "Right now, I am not seeking reelection" because of frustration, "but I am looking to complete my commitment to the end of this year."

Former Superintendent Cortines also admits he won't miss the continual battle for money, a losing fight that forced him to cut $17 million from the budget in 1991 alone.

With a growing Hispanic student population and shrinking budget, however, it seems more critical than ever to have Hispanics with a say in how the budget is spent. And as New York's optimistic Chancellor Fernandez points out, there's hope with Mr. Rojas. "Bill Rojas is a tough administrator," he reminds us, "who is not afraid to bite the bullet and make the hard decisions."

Top Hispanic School Superintendents

Hispanics head hundreds of school districts around the nation. Those in charge of the larger districts—and earning more than $100,000 a year—are listed below.

We compiled this listing with help from the National Association of Latino Elected and Appointed Officials (NALEO). This information is difficult for them to obtain, say NALEO officials, because school superintendents in many states and school systems are appointed rather than elected. Additionally, in some states the title of "superintendent of schools" refers to positions with widely different levels of responsibility.

All the top people listed bear the title "superintendent of schools," with the exception of Joseph Fernandez. He is chancellor of New York City Public Schools.

NAME	CITY	ENROLLMENT	ANNUAL SALARY
Joseph Fernandez	New York, New York	973,000	$195,000
Octavio Visiedo	Dade County, Florida	304,000	$150,000
William Anton	Los Angeles, California	600,000	$148,000
Waldemar (Bill) Rojas	San Francisco, California	63,000	$120,000
Richard (Pete) Mesa	Oakland, California	52,000	$115,000
Victor Rodriguez	San Antonio, Texas	60,000	$112,000
George Garcia	Tucson, Arizona	58,000	$110,000
Armando Henriquez	Monroe County, Florida	8,500	$102,000
Mary Gonzales Mend	Stockton, California	33,000	$100,000

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Gilbert Sandoval says he is happy where he is as chief of the Los Angeles Airport Police, and was never interested in the position as chief of the LAPD. Earlier, he retired from the LAPD after 21 years of service.

that my appeal would not be given any merit and that it wasn't important to the Civil Service Commission to include a Hispanic among the finalists."

Hispanic police chiefs around the country—who belong to the 300-member Hispanic American Police Command Officers Association (HAPCOA)—generally supported the Hispanic candidates for the LA position. "There are a number of qualified Hispanic command officers throughout the nation," declares HAPCOA head Chief Wilfred Navarro Jr. of the Houston Airport Police. "They are just as qualified as Chief Williams."

The Hispanic chiefs had particular praise for Mr. Ortega. "Ruben [Ortega] had a great track record in Phoenix and would have done as well as Willie Williams," says Tampa Police Chief Eduardo Gonzalez. "I thought Ruben would have been a real contender," agrees Chief Louis Cobarruviaz of the San Jose Police Department. Chief Philip Arreola of the Milwaukee Police Department, too, says he "was surprised when I heard that Ruben did not make the final cut. He is a fine officer. I don't know Lee Baca."

Four of the Hispanic chiefs we spoke with say they were invited to apply for the Los Angeles position, either formally or informally. While Mr. Arreola had some preliminary interviews, he decided to remain in Milwaukee. And Mr. Rodriguez says he was approached by some Los Angeles community and business leaders just before it became apparent he would probably be named chief in Chicago. "I almost flew out there once," he recalls.

The timing wasn't quite right for Mr. Cobarruviaz either. "I was approached by a group of command officers and some Hispanic citizens, who invited me to a reception in LA," he recalls. "I was scheduled to go, but I got the appointment here [as chief] just before, so I called and gave them my regrets."

Sam Baca, chief of the Lakeland, Florida Police Department, says he also was approached informally for the chief's job in LA, but declined. Mr. Baca was the second Hispanic to head a major police department, after Mr. Ortega in Phoenix. That position, which he held from 1985 to 1990, was in Albuquerque.

Wilfred Navarro Jr., chief of Airport Police for the City of Houston, has been a police officer since 1950 when he joined the Houston Police Department.

Mr. Arreola sums up the feelings of most of the Hispanic police officers involved. "It is important to recognize that these are not token appointments," he says grimly. Naming a Hispanic chief is "the appropriate statement to make in a city with a Hispanic majority population. If there is any city where that should have been done, it's Los Angeles."

Looking ahead, Mr. Cobarruviaz adds, "I hope in the future, when Chief Williams decides to retire, that Hispanics will finally be considered for the position." Although the recently passed reform legislation known as Charter Amendment F will not give Chief Williams the unlimited tenure that former Chief Gates enjoyed, he is practically guaranteed two five-year terms. Meaning: we will probably still be waiting as the third millennium rolls around. ☐

Top Hispanic Police Chiefs

Name	City	Sworn Officers	Hispanic Officers	Annual Salary
Louis Cobarruviaz	San Jose	1,212	242	$119,000
Matt Rodriguez	Chicago	12,500	960	$104,000
Philip Arreola	Mikwaukee	1,971	109	$92,000
Eduardo Gonzalez	Tampa	818	87	$86,000
Sam Baca	Lakeland, Florida	210	8	$75,000
Gilbert Sandoval	Los Angeles Airport	216	28	$64,000
Wilfred Navarro Jr.	Houston Airport	170	34	$54,000

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COVER STORY

The 1992 HIGH-

By Maura J. Mackowski

High-tech companies flourishing and expanding abroad, despite a lack of government policy.

Photo by Jeff Watts

Recession, taxation, foreign competition, defense cutbacks—the CEOs on our HISPANIC BUSINESS directory of the top 40 Hispanic owned high-tech companies have a lot on their minds this election year.

Above all, they tell us, they need a collective national policy behind them: a strong, clear policy like the one that drove Japan to the top of the consumer electronics heap. These are all companies involved in developing technologies or in manufacturing high-tech products. Right now almost half of them export their products to foreign markets, and within five years 86 percent plan to be selling/expanding overseas.

Their call for action isn't directed just at the presidential candidates. Decisions that can boost or break entire industries are made in Congress, and at the state and local levels too. Those who can't or won't help out, our high-tech leaders say, should at least avoid making things worse. After all, everybody's in this together.

"What *is* our long-term economic goal as a nation?"

Dr. Tom Velez is CEO of CTA Incorporated, a $116 million company in the aerospace and avionics industries that placed number 1 on the 1992 directory of top Hispanic high-tech companies.

-TECH Directory

HIGH-TECH *Companies Grow*

The top Hispanic owned high-tech companies have never done better. Total revenues of the 31 companies that are repeaters from last year's High-Tech Directory showed a 15 percent increase between 1990 and 1991—up from $639.2 million to $735.5 million.

And what happened to the companies that didn't repeat from last year? They're doing even better, if anything. With the exception of one company that fell on hard times, they were omitted simply because we imposed a much more stringent definition of what constitutes "high tech" this year. In this way, we feel we can more truly monitor the pulse of a sector whose fortunes may determine America's future viability as a global competitor—companies involved in cutting edge technologies and innovation.

We eliminated, for example, firms that are primarily retailers, wholesalers, or installers of high-tech equipment like computer systems. As it stands, our High-Tech Directory for 1992 includes only enterprises that either develop new technologies or manufacture high-tech products. They are involved in electronics, aerospace, telecommunications, or biotechnology, and a high percent of their work force is made up of scientists and engineers.

challenges Dr. C. E. (Tom) Velez. He is CEO of CTA Incorporated in Rockville, Maryland, a $116 million producer of flight simulators, avionics, and aerospace software that placed number 1 on this year's high-tech directory and grew by $26.4 million in 1991. CTA's major customer is a federal government that doesn't always seem to know where it's going.

"The Japanese," Dr. Velez reminds us, "have a stated goal of being the premiere supplier of electronics, information systems, and that kind of thing. The Europeans chose to be the leading suppliers of satellites and space launch vehicles. But our only national objective seems to be to 'lower the deficit.' Without a stated collective goal, it's sure hard to imagine that industry is just going to get together and develop one."

Lacking this national commitment to making America a technology leader, our high-tech entrepreneurs say they've been left to fight for survival on their own. They've done better than survive, with 15 percent overall revenue growth (for repeating companies that appeared on last year's directory as well). But for the many companies that have been expanding in the more-industrialized overseas markets, one of their biggest struggles as "loners" is just to get a foot in the door.

Fingers point every which way when it comes to placing blame for this problem. They point at foreign governments, trade unions, business associations, and simple national solidarity. But the fact is that technology consumers in other countries seem more committed than we do to buying from their own. America supplied 40 percent of the world's technology-based products in 1980, but that share is eroding and had already shrunk to 37 percent by 1988, according to the National Science Foundation's report, "Science and Engineering Indicators-1991."

Perhaps reflecting the greater protectionism of overseas markets, 89 percent of the companies on the High-Tech Directory say they import something (raw material, technology, or personnel) for their business—nearly twice the number who currently sell in foreign markets.

Target countries are "not unfriendly. But not friendly either," comments Guillermo (Bill) Fernandez Sr. His company—the Ferco Tech Corporation of Franklin, Ohio with 1991 sales of $5 million—is number 19 on the high-tech directory. Ferco Tech designs and manufactures aircraft engine components for General Electric, Pratt & Whitney, Textron Lycoming, and other industry giants. A forceful push for international business has also won the company contracts with Italy's Fiat and Turbomeca of France that helped it grow about 25 percent last year, and Mr. Fernandez is negotiating his way into a deal involving a Spanish firm allied with Rolls Royce of the U.K.

But right now, Mr. Fernandez explains, it doesn't matter to most European aircraft manufacturers whether an outsider could do the job faster, better, and at less expense. They don't want to hear about it. These companies typically make their own parts—for one reason. Jobs.

"Every country I've tried to deal with is more protective of its jobs than we are," Mr. Fernandez goes on. That's especially true in Germany, which with its historically strong trade unions has been his toughest nut to crack. "They don't even want to talk."

And if you think that's tough, try bashing at doors in Japan, says Dr. Leon Presser, owner of the fast growing Softool Corporation in Goleta, California. Softool, number 19 on the high-tech directory with 1991 sales of $10 million, develops and sells configuration software that allows PC users to keep up with the changes in their applications software. Softool has made inroads recently all over Europe and in portions of the Pacific Rim, Dr. Presser says, but in Japan there are more barriers...if not stone walls. Japanese buyers almost invariably give their business

COVER STORY

The 1992 HIGH-TECH DIRECTORY

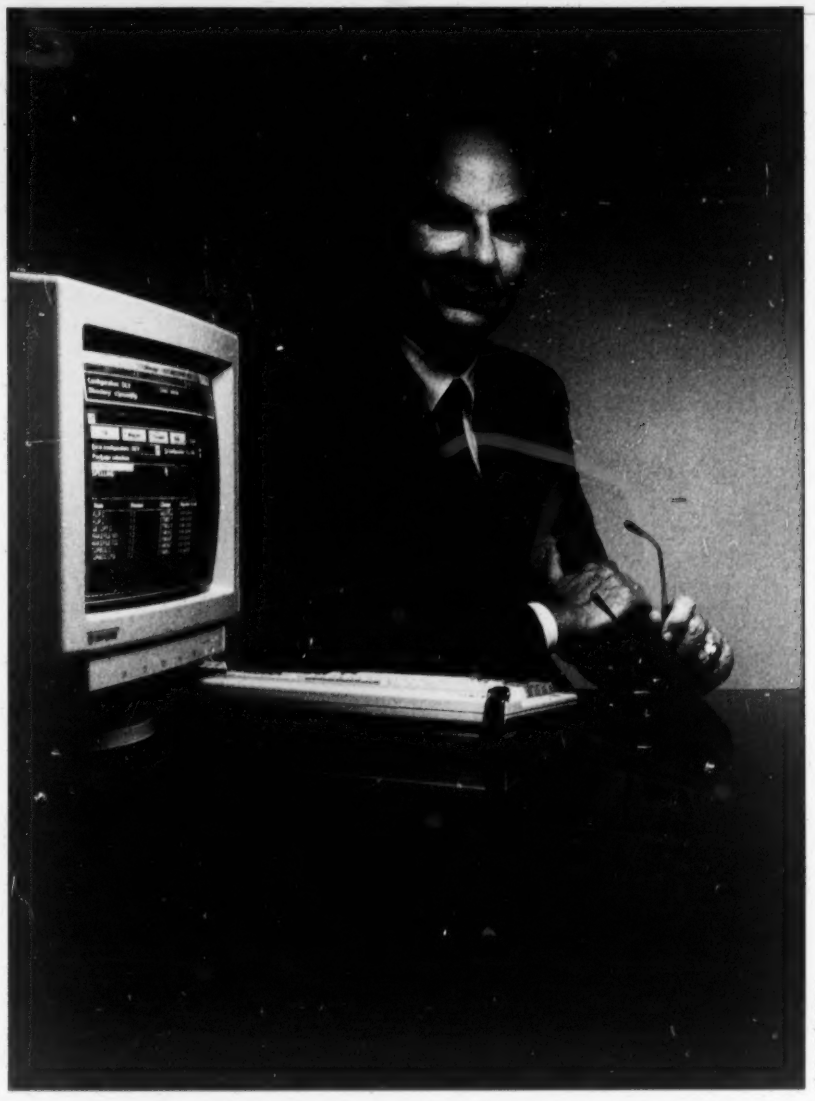


Photo by Bill Boyd

Softool Corporation CEO Dr. Leon Presser, who sells specialized software throughout Europe and the Pacific Rim, strongly backs a high-tech "Buy America First" policy.

to a Japanese firm. Whether from a desire to keep jobs in Japan or just a commendable sense of national loyalty, it works to their benefit—but not to Softool's.

If foreign targets don't want to talk with outside suppliers, it seems that American contractors can't stop themselves from talking. "There's always an attraction to whatever is on the other side of the fence," Dr. Presser reflects, citing the bad feelings that erupted in California recently when the contract for a high-tech rapid transit system was initially awarded to a foreign firm instead of an American company. "Buy America First" is just as important in the policies of one's own home town as on Capitol Hill, he contends, citing another instance he witnessed firsthand where a county government wouldn't support its own high-tech businesses, even as the local tax base suffered through the resulting layoffs. "Not until it became critical did they realize they needed to improve and protect their own turf," he recalls.

"Even at the city level," Dr. Presser continues, "when high-tech start-ups apply for a license they might be asked how much revenue they expect in their first year, and then be told to set money aside in a frozen account to cover the taxes on that revenue. Public officials don't care that the company isn't even bringing in any money yet. They should in fact be saying, 'for the first year, we'll give you a tax break.'"

The one strategy that seems to work against foreign competition and protectionism comes straight from Marketing 101: develop an irresistible competitive advantage. Easy to say. Incredibly hard to do. But it's actually easier for technology and science based firms. The cutting-edge nature of their work—evidenced by their significant investment in research and development—almost guarantees they can provide goods and services that someone, somewhere doesn't already have.

AVG Inc. has a unique niche: designing and manufacturing the computer controls and robots that populate amusement parks. According to CEO Alvaro Villa, buyers from Taiwan, Korea, mainland China, and even Japan, have actively sought out his 85.2 million Valencia, California-based firm to design the theme parks that are just beginning to catch on over there.

AVG, which grew about 26 percent in 1991, has essentially no competition in the Far East, Mr. Villa says. That's because "the Japanese do very well in high-volume production, but when it comes to something as unique as this, it's hard for their system to allow them the flexibility needed. We can react to crises and create new and unique figures and shows from scratch."

Mr. Villa's emphasis on having the competitive edge also kept AVG *out* of the industrial robot market. "They're very expensive to make," Mr. Villa explains, "and they have a lot of competition from human labor. It just wasn't a big enough business for us. And frankly, it was hard to do two things at once."

Dr. Velez at CTA Inc. says price will be the basis of CTA's strategy overseas. He thinks he has spotted a strong target market in the telecommunications arena and will be making a play for it in competition with some real heavyweights. "We just bought one of the leading developers of small satellites," Dr. Velez explains. "Combined with our background in command and control, we hope to get into telecommunications and radio broadcasting in places like South America, Africa, Indonesia, and the Pacific Rim."

He cites Indonesia as an example: a market of 30 million people living on an archipelago, they have so far been isolated

COVER STORY

The 1992 HIGH-TECH DIRECTORY

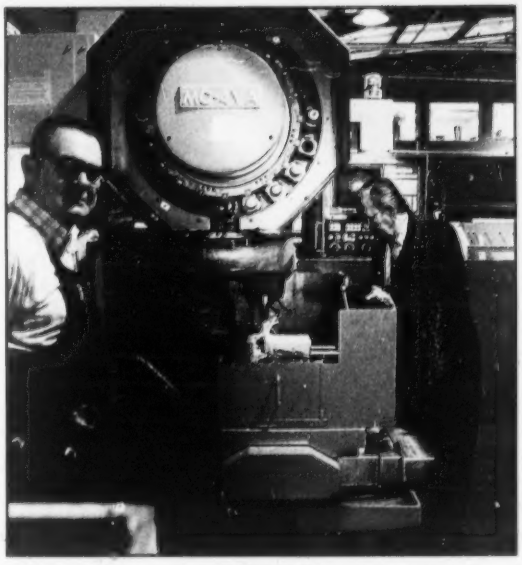


Photo by Gus Saal

Ferco Tech Corporation CEO Bill Fernandez (right) boosted revenues of his aircraft engine business 25 percent last year, partly through expansion in Europe.

from telephone and radio communications.

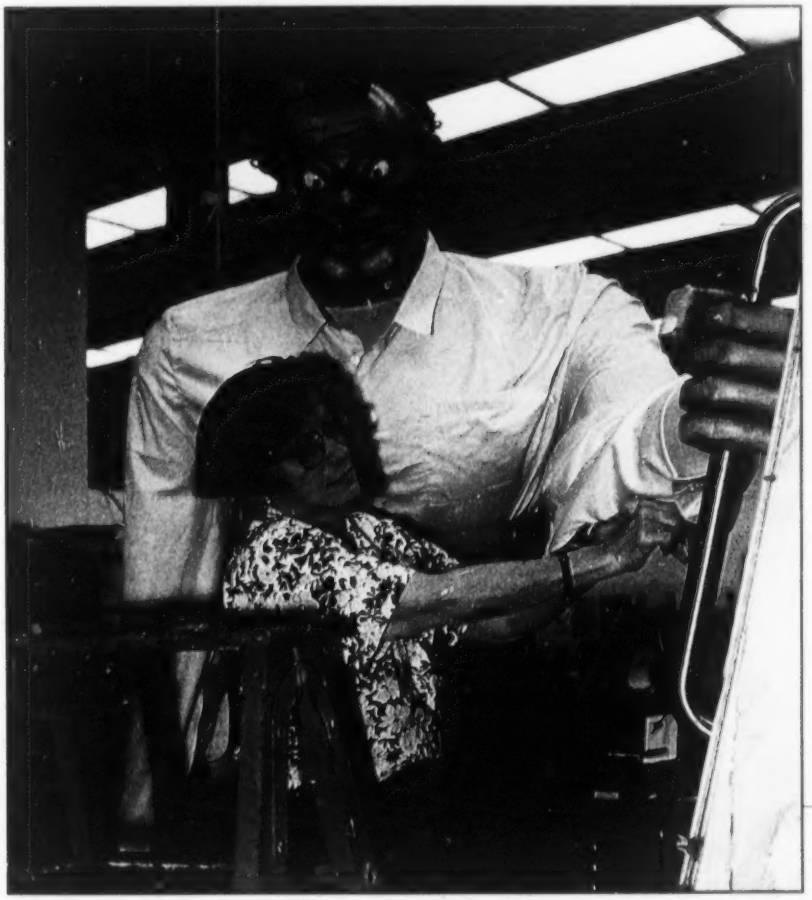
The biggest roadblock Dr. Velez and the other growth minded high-tech CEOs anticipate is financing. Again, it's a political issue, because most feel that the federal government can and should be helping. While there is a tax credit for spending on commercial research and development, it's really just a credit for *increased* spending, covering 20 percent of the amount over and above the average spent in a specified base period.

The catch is that high-tech companies by definition already spend a hefty portion of their budget on R&D. Softool Corporation's expenditures, for example, have stood at 42 percent for the past two years. AVG is "putting a lot of money into R&D this year, even to the detriment of our bottom line," Mr. Villa says. And while CTA has been holding to its ambitious R&D budget, with the recession "we tend to be spending more on near-term activities, more D than R," Dr. Velez admits. "That's bad strategy, but when the choice is bad strategy versus sheer long term survival, you see a lot of companies doing this."

In fact U.S. R&D spending overall has been down or at best flat over the past few years, depending on the report you read. Yet the high-tech leaders are adamant they don't want tax credit legislation or any other decisions to be made without a cohesive industry strategy—without unified backing from the White House and Congress. As a group, they agree that willy-nilly legislation is almost fruitless. "Tax credit legislation gets kicked around by the strongest Congressman, who can get the most votes," Dr. Velez points out. "A national industrial policy is needed to help drive a tax policy."

One thing such a policy should look at, Dr. Velez submits, is the group of research labs he says receive federal research contracts on a non-compete basis. "There are 20 or 30 federally funded R&D centers that were set up during World War II when there was a crisis and the country needed a strong R&D infrastructure," he explains. "Now thousands of people work for those centers, but they're basically civil servants." How, he wonders, can the government expect to foster private laboratories when they themselves offer federal study contracts on a non-compete basis?

Of all the factors that are sapping research spending these days, defense cutbacks have hurt high tech the most. There are fewer programs to bid for, and there's more competition from hungry defense contractors. Seventy-five percent of the top



AVG Inc. costume maker Luz Elena Jaramillo outfits one of the fast growing company's newest amusement park robots.

high-tech companies tell us they are or will be affected by the DOD cuts.

"The Defense Department is probably one of the biggest, best things that has happened to high-tech R&D, particularly for software," says Dr. Presser. "When they see a product that offers a solution to a problem, they recognize it and act quickly." In other industries like finance, he points out, they prudently wait until a software program is established and has become the industry standard before they risk their money. The point is that if it weren't for those DOD dollars at the beginning of the product's life cycle, it might never get to the commercial marketplace.

Another area where our growing Hispanic owned high-tech companies want movement is on the stalled free trade negotiations with Mexico. Unlike the highly industrialized markets of Europe and Japan, Mexico offers potentially vast "ground-up" opportunities for technological inroads and industrialization, beginning with telecommunications, computer systems and software, and environmental controls and remediation.

A full 44 percent of the top high-tech CEOs think their business will be affected by free trade with Mexico, mostly in the form of joint ventures and market development opportunities. Another 17 percent anticipate an impact from free trade with Canada, mentioning such benefits as freer technology exchanges.

None of this means that the HISPANIC BUSINESS high-tech CEOs want to see *more* government. What they *are* pressing for is a national government that has a driver behind the wheel. If we don't know our destination, Dr. Velez says in summary, it's premature to start pushing through incentives for this, tariffs for that, more money for science education, and laws for just about everything.

"We'd better begin to help each other close ranks," Dr. Presser warns. "If even one company goes out of business, it will eventually hurt *you*."

What's Important to the HIGH-TECH CEOs

We asked the CEOs of the 40 top U.S. Hispanic owned high-tech companies about the importance to them of foreign trade, and about their views on specific potential governmental spending and legislative policies. As a group, these specialized entrepreneurs* believe both foreign trade and supportive legislation are important factors determining their future growth.

IMPORTANCE OF FOREIGN TRADE?

1. Do you currently import any raw material/technology/personnel?
   Yes: 89 percent
2. Do you currently export your products or services?
   Yes: 46 percent
3. Will you enter foreign markets or expand current international activities within the next five years?
   Yes: 86 percent
4. Has/will the U.S.-Canada Free Trade Agreement affect you?
   Yes: 17 percent
5. Will a U.S.-Mexico Free Trade Agreement affect you?
   Yes: 44 percent

IMPORTANCE OF GOVERNMENT SPENDING AND STRATEGY?

1. Have you been or do you expect to be affected by the U.S. Government's defense spending cuts?
   Yes: 73 percent
2. Where do you wish the U.S. Government to increase its spending?

- Scientific research by private enterprise: 87 percent
- U.S. space program: 84 percent
- Education: 83 percent
- Transportation system: 76 percent
- Aid to defense contractors wishing to expand their non-military products or services: 74 percent
- Health services: 68 percent
- Scientific research by governmental agencies: 63 percent
- Social services; 53 percent
- Foreign aid to Eastern Europe: 41 percent
- Foreign aid generally: 30 percent

3. What's most important for your company's future growth?

- Support to firms involved in commercial technologies critical to the U.S. competitive edge on the world market: 94 percent
- Promoting "Buy American" in high-tech industry: 81 percent
- Easing U.S. regulations on technology transfer: 78 percent
- Supporting firms involved in defense technologies: 69 percent
- Strengthening intellectual property laws internationally: 69 percent
- Strengthening intellectual property laws in the U.S.: 65 percent
- Increasing and implementing industrial pollution controls: 61 percent
- Preventing uncontrolled dissemination of nuclear and scientific technologies in the former Soviet Union: 53 percent

POLITICAL LEANING?

Which presidential candidate best supports your goals as an entrepreneur *and* as a high-tech professional?

- George Bush: 41 percent
- Former competitor Ross Perot: 34 percent
- Bill Clinton: 6 percent
- None of the above: 19 percent

* Percentages are of CEOs responding to individual questions.

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The 1992 HIGH-TECH DIRECTORY

Rank	Company	CEO	High-Tech Product/Service	No. Emps.	1991 Sales $Mil.
1	CTA Inc., Rockville, MD	C.E. (Tom) Velez	Product Devel. & Software Eng.	980	116.17
2	Colsa Corp., Huntsville, AL	Francisco J. Collazo	Computer Sim./Info. Processing	569	82.20
3	Infotec Development Inc., Santa Ana, CA	J. Fernando Niebla	Imaging Sys. & Software Test/Des.	750	68.90
4	RJO Enterprises Inc., Lanham, MD	Richard J. Otero	Systems Integ. & Solutions Imaging	550	60.90
5	Advanced Sciences Inc., Albuquerque, NM	Ed L. Romero	Aero./Environ. Sys. Eng./Des./Devel.	472	47.28
6	J.T. Slocomb Co., So. Glastonbury, CT	E. John Gregory	Aerospace Mfg. & Fabrication	429	39.45
7	Nat'l Systems & Research Co., Colorado Springs, CO	Celestino E. Archuleta	Systems Integ. & Software Design	572	35.80
8	Comprehensive Tech. Int'l Inc., Chantilly, VA	Celestino M. Beltran	Software Development	500	33.30
9	Magnet Industrial Group Inc., Milford, CT	John Soto	Aircraft Engine Parts/Comp. Disks	250	32.00
10	TAMSCO, Calverton, MD	N.R. Innerbichler	Systems Eng./Integ. & Telecomm.	442	30.26
11	Washington Consulting Group Inc., Washington, DC	Armando Chapelli Jr.	Information Systems Research	360	24.30
12	Hernandez Engineering Inc., Houston, TX	Miguel A. Hernandez Jr.	Spaceflight Operations/Integration	357	16.98
13	Gonzalez Design Eng., Madison Heights, MI	Ric J. Gonzalez	Equipment Design/Engineering	325	16.70
14	Scientech Inc., Idaho Falls, ID	Larry J. Ybarrondo	Nuclear/Hazardous Waste Mgmt.	245	15.48
15	Omniplan Corp., Houston, TX	R.E. Montijo Jr.	Aerospace Support & Engineering	300	13.45
16	Computer Resource Mgmt. Inc., Herndon, VA	Ervin E. Torrez	Computer Networking Solutions	170	12.55
17	HI-TEC Associates Inc. Lakeland, FL	Joseph M. Gonzalez	Aerospace Design & Technology	280	11.86
18	H-R Industries Inc. Richardson, TX	Paul R. Dickinson	Circuit Boards & Process Devel.	130	11.82
19	Softool Corp., Goleta, CA	Leon Presser	Software Change & Configuration	83	10.00
20	Technical Telephone Sys. Inc., Staten Island, NY	George Cruzado	Systems Integration & PC Clones	80	9.50
21	MEVATEC Corp., Huntsville, AL	Nancy E. Archuleta	Aerospace Sys. Integ. & Software	95	9.06
22	Quality Printed Circuits, Phoenix, AZ	Robert Gonzalez	Printed Circuit Boards	120	8.92
23	Deneba Systems Inc., Miami, FL	Manuel Menendez	Computer Software Products	64	8.44
24	Computer Systems Development Corp., Chantilly, VA	J. Luis Hernandez	Sys Eng. & Integ./MIS & Automation	102	7.20
25	RAM Enterprises, Valencia, CA	Marline Monstein	Design Contacts & Connecters	16	7.12
26	Operational Technologies Corp., San Antonio, TX	Max Navarro	Environ. Systems & Software Devel.	135	6.71
27	Pressure Systems Inc., Hampton, VA	Douglas B. Juanarena	Aerospace Pressure Sensing Instr.	75	6.50
28	AVG Inc. Valencia, CA	Alvaro Villa	Computer Control Sys./Design & Eng.	40	5.18
29	HJ Ford Associates Inc. Arlington, VA	Jorge Alducin	Systems Eng./Advanced Info. Sys.	82	5.15
30	Orion Int'l Technologies, Albuquerque, NM	Miguel Rios Jr.	Nuclear Engineering & Systems Test.	80	5.07
31	Computer Aided Systems Design Inc., Matawon, NJ	Jorge Torres	Information Eng. & Mgmt. Consulting	14	5.00
32	Ferco Tech Corp., Franklin, OH	Guillermo Fernandez Sr.	Aircraft Engine Parts/Hrdwr. Config.	76	4.97
33	Alamo Technology Inc., San Antonio, TX	Doroteo Chavarria	Custom Computer Eng./Des. & Devel.	60	4.85
34	Int'l Creative Data Industries Inc. Bethel, CT	Jack Villodas	Equip. System Design/Devel. & Eng.	50	4.60
35	AJT & Associates Inc., Cape Canaveral, FL	Alfredo J. Teran	Aerospace Sys. & Facilities Design	120	3.68
36	Geo-Marine Inc. Plano, TX	Ruben G. Garza	Environmental Research & Analysis	65	3.55
37	Holguin, Fahan & Assoc. Inc. Ventura, CA	Andrew R. Holguin	Environ. Cons. & Remediation Svcs.	25	3.17
38	Int'l Trading & Engineering Corp, Miami, FL	Pablo J. Mila	Equip. Generation Transmission & Dist.	7	2.82
39	Biomedical Int'l Corp., Miami, FL	Juan R. Borges	Biomedical Engineering	8	2.60
40	Craftsmen Corp., Smithtown, NY	Alejandro Salas	Defense Systems & Software Integ.	45	2.20

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A Wealth of Information

Although the United States economy grew between 1977 and 1989 at a rate that would have raised income levels 10 percent across the board, disproportionate distribution of wealth halted economic growth for 99 percent of American families, while the top 1 percent saw their average incomes rise 80 percent. An analysis done by *Business Week* indicates that four factors are to blame for the lopsided distribution of wealth, which is expected to persist into the 1990s. Doctors and lawyers, whose average incomes exceed $165,000, were able to raise fees for their services faster than inflation. In addition, top performers in various fields from corporate management to finance were able to earn more as their companies expanded into global markets. Wealthy households with investments benefited from high real interest rates, and booming stock and real estate markets produced big capital gains for investors. The study found that these factors accounted for 70 percent of the $200 billion increase in the annual income of the top 1 percent between 1977 and 1989.

Sales and Marketing Sizzle

Plans for the second half of 1992 show a dramatic increase in expected hiring for the sales and marketing arena, according to a survey conducted by Sales Consultants International, which polled 1,577 executives responsible for hiring. A 25 percent increase in hiring in the sales and marketing world is expected by the end of 1992. "We have not seen this kind of explosive increase since the second half of 1983, which heralded the end of that recession," says Alan R. Schonberg, president of Sales Consultants International. "Business is definitely getting better and sales are on the upswing, as are the expectations of senior management. This means that America's companies...will need 25 percent more people than they had formerly projected they would need in the last half [of 1992]." Of the companies surveyed, 49.4 percent plan to maintain their current staff sizes, while only 14.6 plan to decrease sales personnel.

Study Groups Work

Potential for improvement in mathematics, science, and engineering among Hispanics, African Americans, and women can be realized through participation in study groups, according to a recent study by Martin Bonsangue of Mt. San Antonio College in Walnut, California. Study groups not only boost minority student performance but can also result in significant cost savings for schools promoting the groups, the study found. Of the students participating in the study, 85 percent identified their ethnic background as Hispanic. These students were enrolled at California State Polytechnic University, Pomona, and were tracked for five years. Funded by the National Science Foundation, this study was the first longitudinal test of a calculus workshop model developed at the University of California, Berkeley.

Engineers Encouraged

The demand for engineers was up by a slim but encouraging margin last year, according to a recent survey of the top 100 companies employing engineers, conducted by *Design News*. In 1991, 733 more engineers were hired than in the previous year, the study found, for a total of 602,733 engineers currently working in the United States. The companies polled, including General Electric, General Motors, and McDonnell Douglas, employ more than 30 percent of U.S. engineers working currently, and 50 percent of those in manufacturing in any type of design function. Companies that may soon crack the top 100 are also places where jobs will soon be available. These companies with high engineering staff growth include the Maytag Company, Zenith Electronics, Timkin Co., and Mattel.

Entry Level Prospects Good

College graduates expecting a difficult job market may be pleasantly surprised, according to a report released recently by Snelling and Snelling, one of the largest employment service companies in the United States. The report cites nearly two dozen "hot entry-level occupations," including health care, information services, finance, marketing, sales, media and communications, and high technology, with many more positions expected to open up in the next eight years. "The gloom and doom reports coming out of the recession have scared many college graduates looking for their first full-time job," says Robert O. Snelling Sr., chairman of Snelling and Snelling. "On the contrary, many fields are growing and need young people starting their careers." Specifically, Mr. Snelling notes that computer service technicians are currently in heavy demand, and the number of physical therapists in the United States is expected to jump 90 percent by the year 2000.

Entry-level Salaries in Growing Fields, 1992

JOB	STARTING SALARY RANGE
Systems analysts	$28,500 to $33,000
Junior financial analysts	$25,000 to $32,500
Nurses	$22,500 to $26,000
Computer service technicians	$22,000 to $25,300
Accountants	$22,000 to $26,800
Banking trainees	$20,500 to $23,600
Junior copywriters	$19,500 to $22,000
Physical therapists	$18,400 to $24,600
Claims representatives	$18,200 to $21,000
Advertising sales representatives	$18,000 to $25,000
Public relations assistants	$18,000 to $23,800
Securities sales representatives	$18,000 to $27,500
Emergency medical technicians	$16,200 to $20,500
Electrocardiograph technicians	$15,500 to $18,000

Source: Snelling and Snelling Inc.